

put to a hard test by an apparently insignificant force striking them disadvantageously. The analgesia of tabetics is very important. An inflamed joint continues to be used long after the time when with normal sensation it would be voluntarily immobilized. This misuse augments the grinding off process. The analgesia may be limited to the deeper nerves, when it is more difficult to determine. The possible etiological connection between the frequent fractures in lunatics and the spontaneous fractures of ataxics was suggested by P. Bruns in 1882. Neumann, in 1883, attributed to a trophoneurosis (from vasomotor trouble) the bone-fragility in psychoses, pellagra, osteomalacy, infantile paralysis, progressive muscular atrophy, locomotor ataxy, leprosy, and various other diseases. More recently spontaneous fractures have been recorded from gliosis and syringomyelitis.

Czerny does not discuss the localization of the central nervous lesion in these joint troubles, but only gives clinical experience.

#### I. CASES DIAGNOSTICATED AS LOCOMOTOR ATAXY.

##### *A—Ankle Joint.*

1. Psychosis and gray degeneration of posterior columns. Subacute arthritis of ankle, resulting in ankylosis. Amputation.

Man of 53 years. The joint trouble began—after weakness and ataxia of legs had reached a high degree—with œdema and redness around left ankle, increased heat and fixation in varo-equinus position. After subsidence of the swelling crepitation was made out, but no pus was obtained on incising. Analgesia of the left lower extremity was noted later. As the false position was not correctable even in narcosis, amputation was performed. Death from the effects of a complicating erysipelas. The special conditions found *p. m.* were chronic pachymeningitis, diffuse sclerosis and atrophy of cerebrum and cord, chronic internal hydrocephalus, and gray degeneration of posterior columns. The articular cartilage of each caput humeri was atrophic, the capsule thickening. The bones of the extremity as also of the other appeared rarefied on section (osteoporosis).

2. Very chronic locomotor ataxy of moderate degree. Arthropathy of ankle-joint from sprain. Arthrotomy. Improvement.

This was in a man of 50 years. On opening the swelling synovia mixed with fibrine concretions was discharged. The body of the astragalus appeared to have been quite ground away, the tibia articulating with the calcaneum by a broad joint-surface. Two years later he was still able to get around with a foot support.

#### B—Shoulder Joint.

3. Ataxy of moderate degree. Arthritis of the shoulder joint from a contusion. Resection. Man of 36 years. The contusion was from a box falling on the shoulder. The chronic swelling resulting had been called a sarcoma (from its great size and slight sensitiveness) by one doctor, and by another an incompletely reduced fracture.

On closer examination, tabetic symptoms were found. On resecting, the capsule and long head of the biceps proved to have been destroyed. The glenoid cavity was about intact, head of humerus bare and eroded. No fungosities, but rice-like formations to size of a pea, pedunculated and sessile. When dismissed there was still some secretion from a fistula. Active motion much less than before the operation.

### II. CASES WITH THE CLINICAL DIAGNOSIS SYRINGOMYELIA.

4. Inflammation of left hand leaving claw position. Suppurative omarthrosis with subluxation. Resection of humerus.

Repeated attacks of inflammation in left arm (hand, shoulder, axilla) with final suppuration about shoulder. The humerus head was found bared of cartilage, soft and ground away. The operation gave a very fair result.

#### C—Elbow Joint.

5. Congelation 20 years previously, leaving claw position of the fingers, loss of the fingers three years previously from a painless inflammation. Arthritis of elbow. Resection. Improvement. The said inflammation had, in fact, attacked three of the fingers, each at a different time. The patient was a man of 42 years. The trouble with the left elbow had been painless and of several months' duration. Despite incision and plaster dressing swelling and suppuration recurred. Joint loose. Two fist-sized swellings back of elbow. Exsec